CLAIMS

1. An apparatus for providing an indication of the correct and/or incorrect placement of an endo-tracheal tube (6) for ventilation, the apparatus comprising:
a processing unit (10) for identifying impedance amplitude changes;
a measuring unit (e) comprising at least two measuring electrodes (e1, e2) for measuring the impedance of a body, the measuring unit (e) being in communication with the processing unit (10);
a power source for the apparatus; and
a display or alarm device (3, 4),
characterised in that, in use, a correct placement of the endo-tracheal tube (6) upon ventilation is indicated by the processing unit (10) identifying a significant change in the impedance amplitude and/or an incorrect placement of the endo-tracheal tube (6) upon ventilation is indicated by the processing unit (10) identifying a change in the impedance amplitude below a threshold level, and the change in the impedance amplitude being shown on the display or indicated by the activation of the alarm.

2. An apparatus as claimed in claim 1 wherein, the apparatus is characterised in that, in use, a correct placement of the endo-tracheal tube (6) is indicated by the processing unit (10) identifying a significant change in the impedance amplitude above a threshold level and/or an incorrect placement of the endo-tracheal tube (6) is indicated by the processing unit (10) identifying a change in the impedance amplitude below the threshold level, and the change in the impedance amplitude being shown on the display or indicated by the activation of the alarm

3. An apparatus as claimed in claim 1 or claim 2 wherein, the threshold level is an impedance amplitude of 0.5 ohms.

4. An apparatus programmed to indicate the correct and/or incorrect placement of an endo-tracheal tube for ventilation, the apparatus comprising:
a processing unit (10) for identifying impedance changes upon ventilation;
a measuring unit (e) comprising at least two measuring electrodes (e1, e2) for measuring the impedance of a body, the measuring unit (e) being in communication with the processing unit (10);
a power source for the apparatus; and
a display or alarm device (3, 4),
characterised in that, the processing unit (10) is programmed to identify significant impedance changes above a threshold value.

5. An apparatus as claimed in claim 4 wherein, the processing unit (10) is programmed to receive an impedance measurement value, identify if the impedance value is equate or greater than the threshold value, and if the threshold value is not reached then the processing unit (10) will activate the alarm device and/or the display device to indicate incorrect intubation.

6. An apparatus as claimed in claim 5 wherein, the processing unit (10) is programmed to carry out the following steps: receive a first impedance

measurement value, identify if there is a threshold value, if there is no threshold value adopt the first impedance measurement value as the threshold value, receive a second impedance measurement value and then identify if the impedance value is equate or greater than the adopted threshold level, if the threshold value is not reached then the processing unit (10) will activate the alarm device and/or the display device to indicate incorrect intubation.

7. An apparatus as claimed in claim 6 wherein, the processing unit (10) comprises a memory unit for the storage of measured, calculated and threshold values.

8. An apparatus as claimed in claim 7 wherein, the processing unit (10) comprises an "on/off" switch or a three position switch comprising a first "off" position, a second "single measurement" position, and a third "monitoring" position.

9. An apparatus as claimed in claim 6 or claim 8 wherein, the processing unit (10) is programmed to identify impedance changes significantly above a threshold value of 0.5 ohms.

10. An apparatus as claimed in any one of claims 4 to 8 wherein, the processing unit operations are repeated over a period of time in order to monitor the placement of the endo-tracheal tube for ventilation.

11. An apparatus as claimed in any one of the proceeding claims wherein, the alarm device comprises a sound emitting device and/or a light emitting device.

12. An apparatus as claimed in any one of the proceeding claims wherein, the apparatus comprises a user interface is adapted for inputting reference thoracic impedance values, threshold impedance values, and/or patient characteristics to the processing unit.

13. An apparatus according to any of the preceding claims wherein, the apparatus is adapted for integration in a defibrillating device.

14. An apparatus as claimed in any one of the preceding claims wherein, the apparatus comprises an endo-tracheal tube (6) for ventilation.

15. A method for externally assessing and monitoring placement of an endo-tracheal tube for ventilation of patients, wherein thoracic impedance signals are obtained upon ventilation based on measurement data obtained from measurement electrodes adapted for placement on the patient's thorax,

c h a r a c t e r i z e d i n that the method comprises

a) analysing the impedance signals to identify significant changes in impedance

c) activating a first display or alarm device if the changes' magnitude exceeds the predetermined value to indicate correct intubation and/or activating a second display or alarm device different from the first device if the change's magnitude does not exceed the predetermined value to indicate incorrect intubation.

16. A method according to claim 15,
characterized in that steps a)-c) are performed by a processing unit connected to measurement electrodes, and that the threshold value is stored in a storage unit connected to the processing unit.

17. A method according to claim 16,
characterized in that previous to steps a) a start signal is given to the processing unit by a user and that steps a)-c) are repeated a during a predetermined period of time or until a stop signal is given to the processing unit by a user.